Reconsidering the relations in constructions with non-verbal predicates

1 Introduction

A well-known challenge to any grammatical description is posed by predicative constructions in which there is no overt copular verb interpretable as a syntactic head. Empty categories used to be designed for one or several types of copula. In order to describe the constructions with non-verbal predication in a systematic way we will consider not only the linguistic entities that are involved, but also the syntagmatic relations holding between them. The HPSG formalisation sketched in this contribution allows for encoding the significant distinctions as well as for capturing the linguistic generalisations without postulating any empty categories.

1.1 Relevant linguistic data

In Slavic language family, Russian offers the broadest spectrum of copula-less constructions, comprising not only ascriptive and identificational predication, but also existential, locative and possessive constructions. Representative examples of Russian copula-less predication are given in (ex. 1).

(a) On gord rezultami.
He is proud of the results.

(b) On durak / tolstyj / vysokogo rosta.
He is a fool / fat / of a high height (i.e. tall).

(c) On brat Ivana.
He is Ivan’s brother.

(d) On na sobranii.
He is at a meeting.

(e) Za uglom (est’) magazin.
There is a store around the corner.

(f) U Kati (est’) samovar.
Katia has a samovar.

While verbs are inherent predicators (ex. 2a), with non-verbal categories this is a derived property. Only in certain cases, however, the process of predicate formation is morphologically anchored – as with Russian short adjectives that are exclusively used as predicates (ex. 1a). As (ex. 2b) shows, their attributive use is ungrammatical. Moreover, in present tense indicative mood they can never occur with an overt copula – cf. the ungrammaticality of (ex. 2c) vs. the past tense example containing an overt copula (ex. 2d).

2 Lexically predicative non-verbal categories

Russian non-verbal predicative categories – i.e. [PRD+] items – are naturally accommodated by the relation of subcategorisation, more specifically, relational case (nominative). In (ex. 1a) and (ex. 2d) it holds between the adjectival predicate (gord 'proud') and the subject (on 'he'). The "copula-less" (ex. 1a) presents the default situation in Russian, which is interpreted as present tense and indicative mood. In fact, the overt copular item (byl 'was') in (ex. 2d) is a
functional syntactic category with raising-verb behaviour. On the one hand, it stands in a relation of inflectional marking to the adjectival predicate (gord 'proud'), supplying the grammatical information on tense (past) and mood (indicative). As for negation, it is realised by the standard negative particle ne (ex. 3).

ex. 3 (Russian)

(a) On ne gord rezul’tatami.
he.NOM.SG.M NEG proud.PRD-ADJ.SG.M resultsINST.PL.
He isn’t proud of the results.

(b) On ne byl gord rezul’tatami.
he.NOM.SG.M NEG be.PAST.SG.M proud.PRD-ADJ.SG.M resultsINST.PL.
He wasn’t proud of the results.

(c) On ne budet gord rezul’tatami.
he.NOM.SG.M NEG be.FUT.3SG proud.PRD-ADJ.SG.M resultsINST.PL.
He won’t be proud of the results.

It seems justified, therefore, to assume that the predicative short adjective (gord ‘proud’) is the legitimate syntactic head selecting, on the one hand, a subject (nominative NP) as well as complement(s) (e.g., rezul’tatami ‘results’) and, on the other hand, a specifier in the form of a ‘be’-copular item realising the verbal inflection if it is different from present tense and indicative mood. In other words, we are confronted with what can be dubbed inflectional copula.

<table>
<thead>
<tr>
<th>mod–cop</th>
<th>pred–adjective</th>
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<tbody>
<tr>
<td>DEPS 2</td>
<td>DEPS 2</td>
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<td>subj</td>
<td>compl</td>
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<td>valence</td>
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<td>pred–dev</td>
<td>pred–adjective</td>
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<tr>
<td>result</td>
<td>result</td>
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Figure 2: Russian predicative derivation

Being morphologically signalled, the outlined combinational potential of Russian short adjectives is derived lexically as a diathesis alternation in the sense of (Avgustinova 2001a, b), which is illustrated in (Figure 2a). The initial element [mod] on the DEPS list of the resulting predicative adjective is identified with the MOD value of the source adjective. This encodes the linguistic generalisation that the subject of a predicatively used adjective is subject to the nominal category modified by this adjective when it is used attributively. The inflectional copula is introduced as a new dependent of the source adjective. Finally, the copular item (byl ‘was’) assigns either nominative (ex. 4d) or instrumental (ex. 4e) relational case to the subject (‘he’). It is specified as being of a particular type (‘fat’). The predicator ‘be’-copular item functions as a functor of ascription. (Figure 2b).

3 Copula as assembling operator

The lexical derivation of Russian predicative short adjectives presented above contrast in a principled way with the constructional treatment of non-verbal predicates if there is no morphological signalling of the predicative status as in (ex. 1b-f). Here the contingent copular item not only marks verbal inflection but functions as an assembling operator putting together two categories that are prototypically non-verbal.

3.1 Ascription

In case of ascriptive predication relating in (ex. 1b, ex. 4) a nominal subject (on ‘he’) with a nominal (durak ‘fool’) or adjectival (tolstij ‘fat’) predicative, the copular item functions as a functor of ascription. In present tense indicative mood, an overt copula seems to be possible, even though the result might need special contextual motivation. This potentially problematic acceptability is indicated by a question mark in (ex. 4b). As (ex. 4c) further shows, semantically loaded verbs like javljat’sja (‘to appear’) or predstavljat’sja (‘to present oneself as’) can be used in the ascriptive construction even in present tense and indicative mood.

ex. 4 (Russian)

(a) On durak / tolstij.
he.NOM.SG.M fool.NOM.SG.M / fat.NOM.SG.M
He is a fool / fat.

(b)? On est’ durak / tolstij.
he.NOM.SG.M is.PRES.IND fool.NOM.SG.M / fat.NOM.SG.M
He is a fool / fat.

(c) On javljat’sja / predstavljat’sja durakom / tolstym.
he.NOM.SG.M appears.3.SG.PRES.RPL fool.NOM.SG.M / fat.NOM.SG.M
He is/ appears a fool / fat.

(d) On byl durak / tolstij.
he.NOM.SG.M was fool.NOM.SG.M / fat.NOM.SG.M
He was a fool / fat. (~ “individual-level”)

(e) On byl durakom / tolstym.
he.NOM.SG.M was fool.NOM.SG.M / fat.NOM.SG.M
He was a fool / fat. (~ “stage-level”)

A classificational type of ascriptive predications typically indicates class membership. In (ex. 4) an individual (on ‘he’) is specified as being of a particular type (durak ‘fool’), i.e. as belonging to a set of individuals with a given property. In contrast, an attributive type of ascriptive predications typically indicates quality. In (ex. 4) the relevant property with respect to which the individual (on ‘he’) is specified corresponds to a particular quality (tolstij ‘fat’). Intuitively, as soon as a given non-predicative category occurs in the predicate, it acquires the property of subcategorising for a subject (broadly understood as the topic of the predication). Note that the predicative case alternation can be captured in a straightforward way – the copular item (byl ‘was’) assigns either nominative (ex. 4d) or instrumental (ex. 4e) relational case to the predicative noun. It also assigns nominative relational case to the subject (on ‘he’).

The controversial distinction between “stage-level” and “individual-level” predicates seems to be appropriate only for ascriptive predication. In Russian, for instance, “individual-level” can be assumed for constructions with an overt copular item if the case of the nominal or adjectival predicative is nominative (ex. 4d). If it is instrumental, as in (ex. 4e), a “stage-level” interpretation is more suitable.

A step towards grammaticalisation can be observed in Polish ascriptive constructions where the case of predication depends on the category of the predicative. A predicative
adjective is assigned the instrumental case (ex. 5a) while a predicative nominal occurs in nominative (ex. 5c).

ex. 5 (Polish)

(a) Kowalski jest / był / będzie chory.
Kowalski.NOM.SG.M is / was / will-be ill.NOM.SG.M
Kowalski is / was / will be ill.
(b)* Kowalski jest / był / będzie chorym.
Kowalski.NOM.SG.M is / was / will-be ill.INST.SG.M
Kowalski is / was / will be a student.
(c) Kowalski jest / był / będzie studentem.
Kowalski.NOM.SG.M is / was / will-be student.INST.SG.M
Kowalski is / was / will be a student.
(d)* Kowalski jest / był / będzie student.
Kowalski.NOM.SG.M is / was / will-be student.NOM.SG.M
Kowalski is / was / will be a student.

A rather under-specified instance of ascriptive predication is observed in constructions relating two adverbials as in (ex. 6)

ex. 6 (Russian)

(a) Tam tixo.
there quietly
It is quiet there.
(b) Tam bylo tixo.
there was.IMPERS quietly
It was quiet there.

Semantically, the assembling operator in ascriptive predication (Figure 3) identifies (the INDEX value in) its content with that of the non-verbal (predicative) complement.¹

³Figure 3: Copula in ascriptive construction

3.2 Identification

In case of identificational predication (ex. 1c), a nominal subject is related with a nominal predicative, with the overt copular item functioning as a functor of correspondence. Semantically loaded verbs like ravnjal'sja (‘to equal’), značit’ (‘to mean’), sootvetstvovat’ (‘to correspond’) or predstawljat' soboj (‘to represent’) are possible even in present tense and indicative mood, are illustrated in (ex. 7b,d-f).

ex. 7 (Russian)

(a) Dva plus dva – četyre.
two.NOM plus two.NOM four.NOM
Two plus two is four.
(b) Dva plus dva ravnjal'sja četyre.JRF
two.NOM plus two.NOM equals.RLF four.DAT
Two plus two equals four.
(c) Uspeš – den'gi.
success.NOM.SG.M money.PL
Success is money.
(d) Uspeš značit' den'gi.
success.NOM.SG.M mean3.SG money.PL
Success means money.
(e) Boris predstawljat soboj brata Ivana.
Boris.NOM.SG.M represent.3.SG self.INST brother.ACC.SG.M Ivan.GEN
Boris represents himself Ivan's brother.
(f) Boris sootvetstvuet bratu Ivana.
Boris.NOM.SG.M correspond.3.SG brother.DAT.SG.M Ivan.GEN
Boris corresponds to Ivan's brother.

The identificational predication is of type equative if it indicates an exclusive identity, as in (ex. 8) between the subject (Boris ‘Boris’) and the nominal predicative (brat Ivana ‘Ivan’s brother’). Note that an overt ‘be’-copula may occur in present tense indicative mood, as (ex. 8b) illustrates. Unlike the situation we saw in ascriptive constructions, here the case of predication remains nominative with all overt forms of the copula (ex. 8c).

ex. 8 (Russian)

(a) Boris – brat Ivana.
Boris.NOM.SG.M brother.NOM.SG.M Ivan.GEN
Boris is Ivan's brother.
(b) Boris est' brat Ivana.
Boris.NOM.SG.M is brother.NOM.SG.M Ivan.GEN
Boris is Ivan's brother.
(c) Boris byl brat Ivana.
Boris.NOM.SG.M was brother.NOM.SG.M Ivan.GEN
Boris was Ivan's brother.

In contrast, the specificational type of identificational indicates non-exclusive, situational identity (ex. 9). It holds between the subject (čuvstvo jumora 'sense of humour') and the respective nominal predicative (prekrasnym kačestvom 'great asset').

ex. 9 (Russian)

Čuvstvo jumora bylo prekrasnym kačestvom.
sense.NOM.SG.N humour.GEN was.SG.N great.INST.SG.N attribute.INST.SG.N
The sense of humour was a great asset.

Characteristic of Russian identificational predicative constructions is that even in the "copula-less" variants there is an overt marking of the border between the "topic part" and the "predicative part". In present tense indicative mood the border between the topic of predication (the subject) and the predicative is typically indicated both intonationally (by a pause) and in orthography by a dash (ex. 1c / ex. 8a, ex. 7a,c). In addition, the demonstrative element èto 'this' may occur immediately following a dash with or without an overt 'be'-copula (ex. 10).

ex. 10 (Russian)
(a) Boris – èto brat Ivana.
Boris.NOM.SG.M DEM brother.NOM.SG.M Ivan.GEN
Boris (this) is Ivan's brother.
(b) Boris – èto est' brat Ivana.
Boris.NOM.SG.M DEM is brother.NOM.SG.M Ivan.GEN
Boris (this) is Ivan's brother.
(c) Boris – èto byl brat Ivana.
Boris.NOM.SG.M DEM was brother.NOM.SG.M Ivan.GEN
Boris (this) was Ivan's brother.

Therefore, it is justified to regard the dash as a marker that delimits the right periphery of the "topic part" in this construction, i.e. to assume a marking relation between the dash and the topic which corresponds here to the subject (Boris/ 'Boris'). Such an interpretation is supported by the parallel present-tense indicative-mood variant in (ex. 10b) where a copular demonstrative item (èto 'this') delimits the left periphery of the "predication part" in this construction and immediately follows the dash. With the overt copular item (byl 'was') in the past-tense indicative-mood variant (ex. 8c), the dash is not needed due to a re-arranged assembling. Interestingly, it is also possible to have a "dashed" copular demonstrative item and an overt 'be'-copular item in the same sentence, as (ex. 10c) illustrates.

Note that the identificational construction in Polish always employs a demonstrative element (to 'this'). The "topic part" in Polish equative identificational constructions (ex. 11) is not delimited by any explicit marker. Therefore, the left periphery of the "predication part" is always marked by the copular demonstrative item (to 'this'). The copular 'be' may co-occur with the latter, as illustrated in (ex. 11b).

ex. 11 (Polish)
(a) Kowalski to nasz profesor.
Kowalski.NOM.SG.M DEM our professor.NOM.SG.M
Kowalski is our professor.
(b) Kowalski to jest nasz profesor.
Kowalski.NOM.SG.M DEM is our professor.NOM.SG.M
Kowalski is our professor.
(c) Kowalski to był nasz profesor.
Kowalski.NOM.SG.M DEM was our professor.NOM.SG.M
Kowalski was our professor.

Semantically, the assembling operator in identificational predication (Figure 4) introduces a key relation of correspondence (supplying an event variable) whose first argument is identified with the index of the subject and its second argument with the index of the non-verbal (predicative) complement.

Figure 4: Copula in identificational construction

3.3 Localisation

In localisation predication (ex. 1d) / (ex. 12), a nominal subject is related with a predicative in the form of a special or temporal adverbial. The overt copular item functions as a functor of localisation. However, as the double question marks in (ex. 12b) indicate, the overt form of the 'be'-copula cannot be used in present tense and indicative mood in with the intended localisational interpretation.

ex. 12 (Russian)
(a) Magazin rjadom. Koncert segodnja.
store.NOM.SG.M nearby concert.NOM.SG.M today
The store is nearby.
(b)?? Magazin est' rjadom. ?? Koncert est' segodnja.
store.NOM.SG.M is nearby ?? concert.NOM.SG.M is today
(c) Magazin byl rjadom. Koncert byl segodnja.
store.NOM.SG.M byl nearby concert.NOM.SG.M byl today
The store was nearby.

Semantically loaded verbs like naxodit'sja ('to be located'), sostojat'sja ('to take place') or prisutstvovat' ('to be present') are again possible in present tense and indicative mood (ex. 13).

ex. 13 (Russian)
(a) Magazin naxoditsja rjadom.
store.NOM.SG.M find.3.SG.RFL nearby
The store is (located) nearby.
Semantically, the assembling operator in localisational predication (Figure 5) introduces a key relation of localisation \( \mathbf{5} \) (supplying an event variable \( \mathbf{4} \)) whose first argument is identified with the index of the subject \( \mathbf{3} \) and its second argument with the index of the non-verbal (predicative) complement \( \mathbf{2} \).

![Figure 5: Copula in localisation construction](image)

### 3.4 Existence

In non-verbal existential predication (ex. 1e) / (ex. 14a) the nominal subject referring to the existing entity is again related with a predicative in the form of a localisation adverbial. However, the status of the overt 'be'-item is more substantial, namely, it function as an existential predicador, which is reflected in the negated present-indicative variant in (ex. 14d). The negation is realised by \( \text{net} \) ('there is not') and the subject acquires the genitive case. The semantically loaded verbal equivalent is the verb \( \text{suščestvovat'} \) ('to exist'), as illustrated in (ex. 14e).

**ex. 14 (Russian)**

(a) **Rjadom** magazin.

nearby     store.NOM.SG.M
There is a store nearby.

(b) **Rjadom** est' magazin.

(nearby) is    store.NOM.SG.M
There is a store (nearby).

(c) **Rjadom** byl magazin.

(nearby) was store.NOM.SG.M
There was a store (nearby).

(d) **Rjadom** net magazina.

(nearby) is-not store.GEN.SG.M
There is no store (nearby).

(e) **Rjadom** suščestvuet magazin.

(nearby) exist.3.SG store.NOM.SG.M
A store exists (nearby).

Note that when the existential predicator is overt, the localisation adverbial is no longer needed for the well-formedness of the construction, which supports it adjunct status. This optionality is marked by the parenthesis in (ex. 14b-d).

![Figure 6: Copula in existential construction](image)

### 3.5 Possession

In non-verbal possessive predication (ex. 1d) / (ex. 15a) the nominal subject referring to the possessed entity is related with a predicative in the form of a prepositionally (\( u' \) 'at') marked nominal referring to the possessor. The overt 'be'-item is functioning here as a possessivity predicador, which is reflected in the negated present-indicative variant in (ex. 15d). Again, the negation in present tense and indicative mood is realised by \( \text{net} \) ('there is not') and the subject acquires the genitive case. The semantically loaded verbal equivalent is the verb \( \text{imet'ja} \) ('to be possessed'), as illustrated in (ex. 15e). Unlike the situation in the existential construction, however, the predicative 'u'-marked phrase is obligatory with overt possessivity predicadors (ex. 15b-e), which supports its complement status.
ex. 15 (Russian)
(a) U Kati magazin.
at Katia.GEN store.NOM.SG.M
Katia has a store.
(b) U Kati est’ magazin.
at Katia.GEN is store.NOM.SG.M
Katia has a store.
(c) U Kati byl magazin.
at Katia.GEN was store.NOM.SG.M
Katia had a store.
(d) U Kati net magazina.
at Katia.GEN is-not store.GEN.SG.M
Katia doesn't have a store.
(e) U Kati imeetsja magazin.
at Katia.GEN be-possessed.3.SG.RFL store.NOM.SG.M
Katia owns a store.

Semantically, the assembling operator in possessive predication (Figure 7) introduces a key relation of possession, (supplying an event variable) whose first argument is identified with the index of the non-verbal (predicative) complement – the possessor – and its second argument with the index of the subject – the possessed entity.

3.6 Functional typology of the copula
To sum up, Russian overt copula functions either as a mere inflectional (tense-mood) marker or as an assembling operator (Figure 8). The former is typical for constructions involving short adjectives or other lexical predicatives. A crucial difference within the latter has to be made between a copular functor, on the one hand, and a copular predicator, on the other hand. In Bulgarian, for instance, the equivalent of the copular functor is 'to be', while the equivalent to the copular predicator is 'to have'.

ex. 16 (Russian)
(a) (Rjadom) ne bylo magazina.
(nearby) NEG be.IMPERS store.GEN.SG.M
There was no store (nearby).
(b) U Kati ne bylo magazina.
at Katia.GEN NEG be.IMPERS store.GEN.SG.M
Katia didn't have a store.

Finally, Russian infinitival existential predicates (Avgustinova 2001c) can naturally accommodated in the proposed type hierarchy, and namely, as more specific instances of the type exist(ential)-predicator.

4 The syntactic structure
For the sake of linguistically adequate formalisation, we have distinguished two principally different instances of non-verbal predication. Morphologically signalled predicative categories (e.g., Russian short adjectives) are heads selecting the copula as a specifier (Section 4.1). Otherwise, the copula is the head (Section 4.2) – when it is overt, this trivially results in a headed phrase; if there is no overt copula, the result is a special type of non-headed phrase.

4.1 Constructions headed by lexically predicative non-verbal categories
In HPSG terms, Russian constructions with an overt inflectional copula are headed phrases which can be built as instances of the type head-all-valence-phrase (Figure 9). The head daughter is of type prd-adjective, as derived lexically in (Figure 2).
The analysis of predicative constructions sketched in this article has three important aspects.

- **Systematicity:** An existing ontology of grammatical dependencies (Avgustinova and Uszkoreit 2000) is exploited for systematically relating variants of predication with and without copula.
- **Concreteness:** The analysis does not need empty categories; neither does it have to stipulate categories, category changes or constituents that are not morphologically signalled.
- **Foundation:** The analysis is embedded in a new version of HPSG, a theoretical model that seeks to combine advantages of unification grammar, dependency grammar and construction grammar. Related future research has to concentrate on drawing more connections to other Slavic languages, inasmuch as the approach presented here certainly allows linguistically adequate modelling of commonalities and minimal differences between related languages. From a more general perspective, it is crucial to consider other languages with non-verbal predicative constructions, e.g., Hebrew. And finally, further development of the “generalised external argument” approach within the theoretical model of HPSG is called for.

**References**


